TOTAL COMFORT CONTROL, NOT JUST R-VALUE

SPF BUILDING ENVELOPE

SPF

Sprayed Polyurethane Foam

Building Envelope

"Our home has many windows to view the lake. Sprayed polyurethane foam was added between the wall studs to increase structural integrity and avoid cracks in the drywall due to high winds. My energy bills are low and the drywall continues to look great."

-Mr & Mrs. Randall Autenrieth
Canyon Lake, Texas

Six Mechanisms of Heat Loss Through a Wall or Ceiling

1. Conduction
2. Radiant Heat Loss
3. Convection Currents
4. Infiltration (Wind Pressure)
5. Intrusion (Wind Wash)
6. Moisture Accumulation (Relative Humidity, Dew and Frost)

The Building Envelope

The total building envelope is a system of construction components which provide protection against movement of:

Air

Moisture

Heat

The true performance of your building system can not be measured with the R-value of the insulation alone, but must also consider air movement, moisture control, health, safety, durability and comfort as well as energy efficiency.

This is true whether your building is commercial, residential or multifamily ... SPF addresses all of these needs.

SPF meets the insulation requirements for both new construction and improvements to existing structures.

Comfort

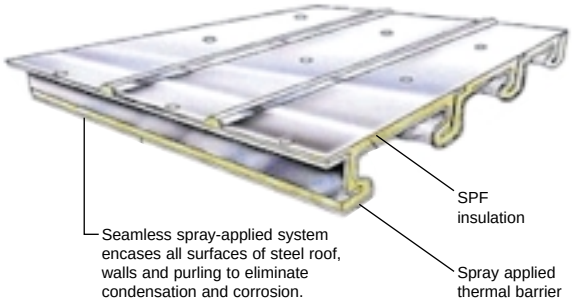
- SPF will eliminate drafts and increase comfort.
- SPF helps maintain a comfortable, constant temperature throughout the building.

Health

- SPF improves indoor air quality;
- Reduces the infiltration of outside air pollutants;
- Reduces moisture condensation within the building walls and roofs.

Value

- Excellent insulation (R-value) of SPF reduces heating and cooling costs dramatically.
- SPF maintains its durable properties for the lifetime of a building.
- Reduces construction cost by providing an air barrier, insulation and moisture barrier all in one product.
- SPF reduces long term maintenance and increases the life of the building.



"Environmental control within a building envelope depends on strong interactions between heat, air barrier and moisture transport. ...SPF is an effective air barrier and weather barrier because of its ability to seamlessly fill irregular spaces and provide water resistance."

-Mark Bomberg, PHD, PE National Research Center of Canada, Construction Practice; Building Envelope and Environmental Control

"Before Hurricane Allen blew onto South Padre Island with sustained winds over 125 mph, my company installed a portion of an SPF application to the office section at a lumber yard's post frame construction building. The crew completed one corrugated wall and roof section before the storm hit. We discovered upon our return that the storm carried away all of the metal except where we had applied SPF."

Mason Knowles, Technical Director, SPFA

"My home, insulated with spray polyurethane foam, in coastal South Texas has run at 74° all year long for about 1/3 the energy cost of my neighbors."

Ron Herrington, home owner

"The number one cause of building damage is moisture."

Antoine Tenwolde

"During a design wracking event like a hurricane, there would be less permanent deformation of a wall elements and possibly less damage to a structure that was braced with SPF filled walls."

NAHB Research Center Report

SPF wall Panel

Performance Testing, 1992

For additional information contact *The Spray Polyurethane Foam Alliance. The Alliance has amassed a tremendous library of information on SPF. To order this document call (lit sales) and request AY-XXX.*

Environment

- In the building envelope, SPF helps to reduce fossil fuel consumption.
- SPF provides a lower environmental impact promoting "sustainable" construction.
- SPF provides greater durability with less maintenance.
- SPF helps reduce structural damage due to high winds.

Conditions such as swimming pool climates or freezers require special consideration.

Good building science requires controlled mechanical ventilation.

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